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Police Mathematics

Sirens and Accidents

State Speed Limit Survey

Wisconsin's New State Patrol

Parking Study in Waterbury

Stopping Distances Decisions

(*See page 20*)

TRAFFIC DIGEST & Review

The

Traffic Digest & Review

OF THE TRAFFIC INSTITUTE, NORTHWESTERN UNIVERSITY

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This publication is produced to serve as a source of information and a medium for the expression of responsible opinion in the street and highway traffic field. From time to time there will appear herein expressions of opinion that do not necessarily reflect official Traffic Institute policy.

In This Issue

Survey of State-Wide Speed Limits 1
Remove Sirens—Reduce Accidents, *by Timothy J. O'Connor* 3
TD&R Bonus Offer 7
Wisconsin's New State Patrol 8
Waterbury's All-Night Parking Survey, *by Robert D. Fleischer* 12
Traffic Deaths Reduced in S-D Day Period 19
Know the Law, *by Robert L. Donigan and Edward C. Fisher* 20
Statistical Story 26
Driving After Drinking Tests 28
Institute Book Review 29
Training Calendar 30

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Michigan State Police Reports on

Survey of State-Wide Speed Limits

Most chief law enforcement officers in the states now having numerical state-wide speed limits in effect consider them to have advantages over "reasonable and proper" limits, according to a questionnaire-survey recently completed by the Michigan State Police. The questionnaire was prepared under the direction of Commissioner Joseph A. Childs.

Replies were received from 36 of the states having state-wide numerical speed limits and from seven states having "reasonable and proper" limits.

Advantages claimed by the chief law enforcement officers are:

1. Provide a needed guide for drivers.
2. Provide an effective tool for highway patrol officers.
3. Help reduce speed on rural trunk lines.
4. Contribute to the reduction of the traffic death rate.
5. Generally are in favor with highway users.

There is a trend toward absolute limits, replies to the survey indicate. The chief law enforcement officers of ten of the states having *prima facie* numerical limits would like to have them changed to absolute so they will be better understood by drivers and will be more enforceable by the police and courts. All states, with one exception, now having "reasonable and proper" limits believe state-wide numerical limits would have advantages over their present limits.

Since the replies were received from persons who are particularly well informed concerning the problems involved, it is believed the following comments by these persons will be of interest to readers of the *Traffic Digest & Review:*

"Too many people read in various publication that this state has a 'reasonable and proper' limit and most of them construe this as wide open. Do not believe prima facie limits have any merit or meaning."

"It is our considered judgment that prima facie limits do not take into account the chance of error in human judgment—that all drivers will not have the same idea as to 'safe and proper' speed. An absolute speed limit does necessarily limit the speeds of those drivers who may be capable of faster speeds but more importantly, it restricts those drivers who are not capable of faster speeds, thus making the highways safer to drive on."

"The most trouble we encounter with a reasonable and prudent speed is that judges over the state do not agree on the speed which constitutes

a violation and we feel that the violation and penalty should be uniform throughout the state."

"It is practically impossible to obtain a conviction in many courts based on speed alone. Most judges and prosecutors require evidence of other careless acts in addition to speed. Since speed is the major factor in the severity of accidents, it is imperative that speeds be reduced and this requires an enforceable speed limit law and sufficient police personnel to efficiently enforce it."

"If drivers would adhere consistently to a lower speed many accidents would be prevented. Public sentiment, however, demands higher speed limits leaving (stricter enforcement) as the necessary weapon to combat the rising accident rate. Stricter enforcement, however, is useless without 'stricter adjudication'."

"Have a 'reasonable and proper' limit under hazardous conditions even though speed is lower than absolute limit."

"Radar has been used very successfully in speed control in conjunction with absolute speed limits."

"The use of radar has had a tendency to increase our speeding arrests; the public has accepted the use of radar and slowed down considerably; and with its use we have reduced accidents considerably."

A copy of the complete survey may be obtained from the Michigan State Police, East Lansing.

* * *

Now Truck Weighing Has Gone Electronic

The Minnesota Department of Highways has installed three electronic scales for use in the enforcement of truck-axle load limits. The scales which are set into the driving lanes of the highways, have been built into U.S. Route 12 east of St. Paul and U.S. Route 100 west of Minneapolis. They will also be used for collection of traffic data.

Trucks will be weighed as they pass over the new scales and weights will be recorded on a tape at a near-by scale house. If a truck exceeds legal axle weights, an electric sign will light up, directing the truck driver to proceed to the scale house where the vehicle will be re-weighed and the exact amount of overload recorded. Trucks that are not overloaded will be able to continue on their way and congestion at scale houses will consequently be eliminated.

Studies conducted by the department's traffic-planning division in 1954 revealed that 8.6 per cent of all trucks weighed had overloaded axles. Violations were comparatively rare among single-unit trucks, but the studies showed that 42.5 percent of five-axle semi-trailer trucks had one or more axles overloaded.

—*Better Roads.*

Chicago's Experience

Remove Sirens—Reduce Accidents

by

TIMOTHY J. O'CONNOR
Commissioner of Police
Chicago

Disconnecting sirens on squadrols* and on traffic enforcement coupes has effected a material reduction in accidents in squadrols and a slight reduction in the accident rate of traffic enforcement coupes. This has been accomplished without noticeable loss in time of assignments or in arrests for speeders. In fact, arrests for speeders increased.

These facts were brought to light as a result of studies made comparing accident experience before and after disconnecting sirens on our squadrols and traffic enforcement coupes. It was thought that arrests for speeders might be reduced but this proved groundless.

During 1954, traffic accidents involving squadrols were occurring at an alarming rate. Most of these accidents were happening while squadrols were on emergency runs with sirens in use. It was felt that perhaps the sirens, or dependence upon them, contributed to the accidents. It appeared that too much reliance was being placed on the sirens to clear the path, rather than critical analysis of traffic situations by the drivers.

Warnings were issued to drivers of squadrols to use greater caution especially on emergency runs, but the accidents continued. It was then decided to disconnect the sirens and use the Mars light as the indication for emergency vehicle. This placed the burden of speed with caution directly upon the driver. There could be no reliance upon the siren to provide a clear path or right-of-way at intersections.

The order to disconnect sirens on squadrols was issued on November 29, 1954. The before-and-after siren-disconnect order accident experience is shown below:

January 1, 1954 through June 30, 1954—Sirens Connected.

Total Squadrols	Total Accidents	Severity		
		Accidents Fatal	Accidents Injury	Property Damage Accidents
58	29	0	0	29

* A squadrol is a combination of a squad car and patrol wagon. It is 2-way radio equipped and is used for routine patrolling within its own district. It may also be assigned to calls in other districts when and where needed. It is used for the removal of sick, injured, and dead and for the transportation of prisoners.

January 1, 1955 through June 30, 1955—Sirens Disconnected.

Total Squadrols	Total Accidents	Severity		
		Accidents Fatal	Accidents Injury	Property Damage Accidents
56	11	0	0	11

It will be seen that with one more squadrol in operation there were 18 fewer accidents. This represents a reduction of 62 percent without adjusting for the one additional squadrol.

It is recognized that accident frequency correlated with miles driven would be a more ideal measure, but because the reduction is so great and because the study covers similar periods and conditions it is believed that the direct comparison is adequate for this purpose.

Shortly after sirens were disconnected from the squadrols it was decided to do the same with our traffic enforcement coupes. Results of this action are shown below:

February 1, 1954 through July 31, 1954—Traffic Enforcement Coupes—Sirens Connected

Total Accidents	Severity		
	Accidents Fatal	Accidents Injury	Property Damage Accidents
11*	0	0	11

* One-man cars were involved in seven of these accidents; two-man cars in four.

February 1, 1955 through July 31, 1955—Traffic Enforcement Coupes—Sirens Disconnected

Total Accidents	Severity		
	Accidents Fatal	Accidents Injury	Property Damage Accidents
14*	0	0	14

* One-man cars were involved in seven of these accidents; two-man cars in seven.

It would appear from these figures that accidents increased with sirens disconnected. Actually, this is not the case. A further check revealed that there were more car-units (one car working 8 hours) operating during the latter period when sirens were disconnected.

The following chart shows the breakdown from which the accident rate per car-unit was computed. It lists, also, the arrests for speeders for the comparative periods.

Chicago Police Department photo by Sgt. Joe Casey

Chicago Police Department squadrols, like the one shown here, experienced fewer traffic accidents after their sirens were disconnected.

February 1, 1954 through July 31, 1954—Traffic Enforcement Coupes—Sirens Connected

Total car-units*		2-man car-units	1-man car-units	Speeding arrests
Feb.	523	44	479	888
March	646	195	451	1079
April	542	157	385	970
May	374	86	288	552
June	393	83	310	473
July	355	64	291	571
Totals	2833	629	2204	4533

* Car-unit represents an eight-hour tour of duty for one car.

February 1, 1955 through July 31, 1955—Traffic Enforcement Coupes—Sirens Disconnected

Total car-units		2-man car-units	1-man car-units	Speeding arrests
Feb.	659	175	484	1354
March	771	232	539	2513
April	665	192	473	1925
May	690	195	495	2512
June	767	214	553	2553
July	772	201	571	2645
Totals	4324	1209	3115	13502

The 4324 car-units operating with sirens disconnected during the period studied in 1955 represents an increase of 53 per cent over the number of units in operation during that period in 1954. During this period in 1955 there was an increase of 27 per cent in total accidents. Actually, however, this represents a reduction in the accident-rate, though it is slight.

It was calculated that the accident rate per 24 hours of operation of each car was .012, with sirens connected, during the period studied in 1954. The rate per 24 hours of operation for each car, with sirens disconnected, during the period studied in 1955 was .010.

There was some contention that speeding arrests would be more difficult to obtain without the use of sirens. This was not borne out by the figures listed above. There was an increase of 98 per cent in total speeding arrests by the Motor Enforcement Coupe Unit— with the sirens disconnected. In considering the greater number of operating car-units during 1955, the rate increased 95 per cent. However, there is no claim that disconnecting sirens will cause an increase of speeding arrests. We believe the increase to be due to some other factor or factors not immediately discernible. In the squadrol accident study, it appears to be clear that the disconnecting of the sirens was followed by greater caution and fewer accidents.

In the traffic enforcement coupe accident study, this is not so decisive. However, the rate of accidents was reduced—though slight. More time is needed in both categories and more data must be considered before definite conclusions can be offered.

Thus far, it looks favorable. We intend to continue with our program. In fact, we may extend it to include other police vehicles such as our Accident Investigation Division cars.

* * *

ROSTER OF INSTITUTE'S TPA GRADS AVAILABLE

A roster of graduates of the Traffic Institute's Traffic Police Administration Training Program (1936-1955) has been published. Because of the limited number of copies available, requests from TPA graduates will be filled first. Address a card or letter to the Traffic Institute, 1704 Judson Ave., Evanston, Ill., ask for "Grad Roster," and give your name and address.

BAILLIE OF MANITOBA HEADS AAMVA

Robert B. Baillie, registrar of motor vehicles of Manitoba, is the new president of the American Association of Motor Vehicle Administrators. He was elected at the recent 23rd annual conference in Rockland, Me.

Memo to: TD&R Subscribers

From: Circulation Manager

Subject: Gift Offer

Excuse us if we steal a little department store advertising lingo, but here's an offer we believe you will not want to miss:

One *free* Accident Investigator's Template (*see cut*) will be given to each person who subscribes to the *Traffic Digest & Review* during the month of January, 1956.

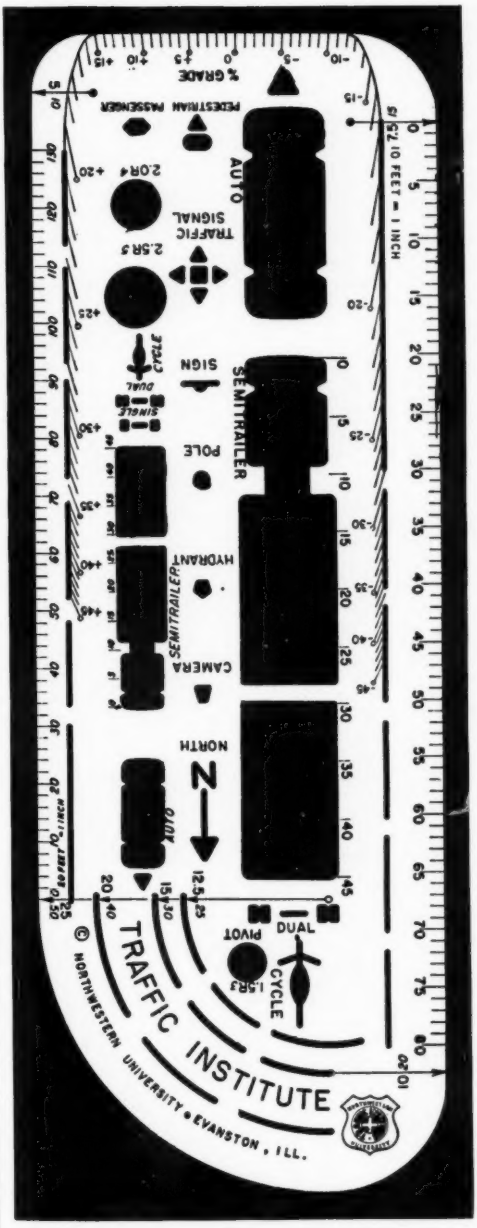
> Present subscribers to the magazine may have a free template by renewing their subscriptions during the month of January. Renewals will take effect when current subscriptions expire.

This gift offer is a 3½ x 10 in. non-shrinking plastic template containing a "% Grade" scale, two measuring scales (1 in. equals 10 ft. and 1 in. equals 20 ft.), and two dozen scale cut-outs (auto, truck, signal, etc.). It can be used in drawing scale diagrams of traffic accidents and in estimating per cent of grade.

> The template is priced individually at $1.50. You can have this and a one-year subscription to the TD&R for the regular subscription price of $5.00.

This offer also applies to departmental quantity orders (five or more) in which a 20 per cent discount is given. But remember—in order to get your free template your subscription—or renewal—must be postmarked during the month of January, 1956.

Write to *Traffic Digest & Review*, 1704 Hudson Ave., Evanston, Ill.



Wisconsin's New State Patrol

In 1954 Governor Walter J. Kohler appointed a special highway safety committee. One of its jobs was to win public support for stronger state-level enforcement in a state which traditionally relied upon county-operated patrolling for the enforcement of traffic laws in rural areas.

Later that year, Commissioner Melvin Larson of the State Motor Vehicle Department discussed the enforcement situation with L. E. Beier, director of the department's enforcement division, and it was decided that Mr. Beier should visit the Traffic Institute of Northwestern University and request a special study of rural traffic law enforcement needs in the state.

The 1955 Wisconsin legislature, recognizing the need for strengthening the state's enforcement program in rural areas, acted to establish a state patrol of 250 men, as compared with the then existing patrol of 70 strong.

The new program featured continued reliance upon county patrols of proven caliber to share in the task of making Wisconsin a well-patrolled state, but looked to the early addition of 180 new officers to the State Patrol to achieve statewide balance and consistency in traffic law enforcement.

Faced with the task of enlarging the state patrol to its full new authorized strength of 250 men, Commissioner Larson and Director Beier determined that the first step was to secure the finest personnel obtainable.

Accordingly, qualifications for new patrol officers were set high enough to eliminate 400 out of an original 1,300 applicants at the outset. The remaining 900 were subjected to medical examinations and civil service tests severe enough to reduce the eligibility list to 119.

The men in this small, well-screened group were invited to submit written applications for officer training. These applications were comprehensive, calling for five full pages of information on each candidate, sworn to before a notary public or other officer authorized to administer oaths.

Each applicant was then subjected to a field investigation and was orally interviewed. Then the men still in good standing were finger-printed and cleared through the FBI. Finally, 50 men were accepted for enrollment in the first of four 13-week classes at the newly organized Wisconsin State Patrol Academy; and if at this time these 50 men breathed a sigh of relief it probably was because they didn't fully anticipate the arduousness of the training program which still lay ahead of them.

For these men, and those who will follow them in subsequent classes, are to receive training which for its completeness and thoroughness has been called unique in the annals of highway patrol administration.

The Wisconsin State Patrol Training Academy is located at Camp

U.S. Army Photograph

Commandant Lawrence A. Pavlinski and Officers Bruce L. Bishop and Charles W. Litkey conduct ranks inspection at the Wisconsin State Patrol Academy at Camp McCoy, Wis.

McCoy, an army post; but this isn't the only thing about the school which may remind Patrol candidates of their days in the military service. A rigid code of discipline is maintained, similar to that used in army officer schools.

Cadets must maintain high standards of neatness and personal appearance. They may leave the school area only with permission of the commandant or senior duty officer. Principles of military courtesy, including the hand salute, are in effect at the school. Reveille is at 6 a.m., lights out at 11 p.m.

Students receive demerits for infractions of rules and regulations established by the Academy. An excessive number of demerits may cause a student to be "washed out" of school. Before the first class reaches mid-term, several cadets had been dismissed for failure to obey regulations.

How do the students react to such rigid discipline?

The cadet student council agreed that the dismissal action taken against the students could not have been avoided under the circumstances. As a whole the cadets accept school regulations as a necessary part of officer training. They regard strict discipline as a personal challenge, a justifi-

U.S. Army Photograph

Melvin L. Larson, commissioner of the Wisconsin Motor Vehicle Department, lectures to students at the Wisconsin State Patrol Academy. Graduates of the first 13-week recruit course will be on duty on Wisconsin highways this month.

able qualification for membership in one of the finest organizations of its kind and a reasonable test for fitness to serve as a guardian of the public safety. Class morale is high.

Of course the chief function of the Academy is to teach the men their new job, and to provide professional training in a multitude of subjects. The director of training is Robert P. Shumate, Jr., field representative for the Traffic Institute of Northwestern University, which aided in setting up the Academy curriculum.

Serving on the Academy faculty are members of the Traffic Institute staff, members of the Wisconsin State Patrol, and representatives of other Wisconsin state departments and various cooperating agencies.

The Traffic Institute is handling the presentation of such subjects as the following: Human relations, because one of the first problems of the new enlarged Patrol will be to make a favorable impression upon an alert and exacting public; accident investigation; traffic direction; police ethics; the keeping of accurate traffic records; laws of arrest; rules of evidence, and the use of speed measuring devices.

Veteran State Patrol officers are called upon to explain state motor vehicle weight and length laws, since the enforcement of such regulations will continue to be an important function of the Patrol. Members of the Motor Vehicle Department also discuss department policies and orders, the state police communications network, and the use and maintenance of Patrol equipment.

Representatives of other agencies such as the State Crime Laboratory,

the State Highway Commission, the Attorney General's Office and the Department of Public Instruction handle such subjects as scientific aids to enforcement, interrogation of witnesses, school bus transportation regulations, photography, chemical tests for intoxication, traffic engineering, and court procedure.

The University of Wisconsin, the American Red Cross, the FBI, and the Interstate Commerce Commission present courses in effective writing, first aid, I.C.C. regulations, and other subjects.

HERE'S ONE YOU WON'T WANT TO MISS!

Any motorist who builds his driving habits around some simple rules on *how to see and what to look for* in traffic will have little chance of either causing an accident or of being trapped by someone else's mistake.

So say two Detroit researchers whose studies of driving errors have attracted growing interest among insurance and safety officials.

"Let's Teach Drivers How to See!" will appear soon in the *Traffic Digest & Review*. It's by Harold L. Smith, a driver training supervisor with a 30-year no-accident record, and John J. Cummings, an automobile industry traffic research director.

Still others who are cooperating in the training program are members of the Milwaukee, Madison and La Crosse Police Departments and the Indiana State Police and Dr. Herman Heise, Milwaukee, eminent authority on chemical tests for intoxication.

The first contingent of newly trained patrol officers will be on duty in January, and at that time the second course for officer candidates will get underway at Camp McCoy.

Alterations in the uniform—including adoption of a dark blue service hat—and newly marked Patrol vehicles will also contribute to the new look in state traffic enforcement for 1956.

A new era is beginning for traffic law enforcement in Wisconsin. Citizens and friends of the Badger State will be watching the new patrol force with great interest and with encouragement and hope for the future.

* * *

Downtown Idea Exchange, New York City, publishes twice-monthly bulletins devoted to redeveloping and promoting the downtown area. Subscribers are business and civic leaders.

* * *

According to the National Municipal Review, more cities over 25,000 population have the council-manager plan than any other form of government.

50 Cities Reply to:

Waterbury's All-Night Parking Survey

by

ROBERT D. FLEISCHER
Managing Director
Waterbury (Conn.) Taxpayers' Association Inc.

A QUESTIONNAIRE on the prohibition of all night parking was sent to the executives of 64 cities in the 100,000 to 250,000 population class. Among the questions asked were whether all-night parking was prohibited, and if so, during what hours of the night and months of the year; whether the ban was difficult to enforce, and what were the advantages and disadvantages of such a ban.

A total of 50 cities replied. Of these, 33 or 66 per cent reported some sort of ban on all-night parking. Of the 17 cities reporting no ban, two of them . . . Flint and Wilmington . . . formerly had all-night parking bans which have since been repealed. Wichita, now without a ban, is considering the adoption of one on "an alternate side of the street basis to facilitate street cleaning in multi-family areas."

Cities having all-night parking bans in effect longest are mainly located in New England. Hartford's ban is the oldest, going back to the year 1920. New Haven adopted a ban sometime soon thereafter. Bridgeport, Providence, and Spokane have had all-night parking bans since about 1925; Dayton since 1926; Pasadena since 1927; and Kansas City since 1931. Cities which have adopted all-night parking bans since 1950 include: Camden, Duluth, Peoria, Salt Lake City, South Bend, Worcester, and Youngstown.

For the most part the average ban covers a period of four hours, usually between 2 a.m. to 6 a.m. and limits parking during this time to an average of one hour. A typical ordinance is that of Springfield (Mass.) which states:

> "It shall be unlawful for the driver of any vehicle, other than one acting in an emergency, to park said vehicle on any street for a period of time longer than one hour between the hours of two ante meridian and six ante meridian of any day."

The longest ban period covers eight hours which in Bridgeport is between 11 p.m. and 7 a.m. and in Dayton 10 p.m. to 6 am. The longest permitted parking during the ban period is in Miami which allows no more than six consecutive hours. For purposes of reference the Model Traffic Ordinance, as recommended by the Traffic Institute of Northwestern

University, prohibits parking for a period longer than 30 minutes between the hours of 2 a.m. and 5 a.m.

Several cities report their all-night parking ban in effect during the winter months only for the purpose of facilitating snow removal operations. These include Duluth, Fall River, and Worcester. Syracuse's ban is in effect all year but covers a longer period during the winter months.

Other cities either restrict their ban to the central business district or concentrate their enforcement of it in that area and along major thoroughfares and bus routes. This arrangement is followed in El Paso, Fall River, Fort Wayne, Miami, South Bend, Tampa, and Youngstown. An opposite position is taken by Little Rock where night parking is prohibited "on any street *outside* of the congested district."

Another modification of the ban is the allowance by some cities of all-night parking on certain streets or alternate sides of streets according to a fixed schedule. For example, Worcester's ordinance permits "parking from midnight to 6 a.m. during certain months on the even-numbered side of streets at locations where parking is already prohibited on the odd-numbered side."

For the past one and one-half years Syracuse has invoked its ban in accordance with the calendar . . . on the odd-numbered side of streets on odd-numbered days and on the even-numbered side of streets on even-numbered days. Similar plans are followed by South Bend and Gary.

Fall River, which bans all-night parking during the winter months on main thoroughfares and bus routes, permits parking on other streets on the side opposite fire hydrants, while Albany allows parking on one side of the street in the older sections of the city.

A number of cities have lost the effect of their parking bans by lack of or loose enforcement of them. Albany enforces "only in the newer residential sections of the City where there are places off the streets for cars to be parked." Charlotte states that its ban was "not intended to be strictly enforced" but at the same time feels that an all-night parking ban is "much needed." Dayton reports that its ordinance is enforced only against trucks and Evansville states that its ban has not been of benefit because of a "lack of enforcement." Kansas City says that its ban is impossible to enforce because of a "lack of sufficient police officers" and because it is "against public opinion."

Peoria states that its ban is not enforced in residential areas "except on a complaint basis." Such is also the case in Salt Lake City. In Reading no attempt has been made to enforce its ban "for 16 years." Spokane cites the number of houses and apartments built since the war without garages or provisions for parking and the lack of manpower as the two things contributing to its policy of non-enforcement. Spokane further notes, however, that this situation has made it "very difficult" for the street department to clean streets and remove snow, and for the police

REGULATION OF ALL-NIGHT PARKING IN 50 CITIES

City and State	*Est. Pop.*	*Area Sq. Mi.*	*Illegal?*	*Is All-night Parking Enforced?*	*Parking Limits*
Albany, N. Y.	135,000	...	YES	In new residential areas	No parking : 3-5 a.m.
Allentown, Pa.	106,756	17	NO	....	....
Austin, Texas	180,000	52	YES	NO	....
Berkeley, Cal.	115,000	9.3	YES, for heavy duty commercial vehicles	YES	1 hr. : 2-5 a.m.
Bridgeport, Conn.	175,000	18	YES	YES	3 hrs : 11 p.m.-7a.m.
Camden, N. J.	124,555	9.5	YES	YES	....
Charlotte, N.C.	150,000	32	YES	Not rigidly	1 hr. : 12-7 a.m.
Dayton, Ohio	*280,000	29.4	YES	Against trucks	4 hrs : 10 p.m.-6 a.m.
Des Moines, Iowa	184,032	56.4	NO	....	....
Duluth, Minn.	104,511	62	YES, from Nov. 15th to April 1st	YES, additional help needed	....
El Paso, Texas	185,000	102	YES, in central business district	....	....
Erie, Pa.	140,000	7.5	NO	....	....
Evansville, Ind.	135,000	...	YES	NO	30 min. : 2-5 a.m.
Fall River, Mass.	112,000	41	YES, from Dec. 15 to Mar. 31 on certain arteries and bus routes	YES	.... : 12-6 a.m.
Flint, Mich.	200,000	30	NO, ordinance removed in 1949	....	....
Fort Wayne, Ind.	143,000	22	YES, "in downtown sections"	YES	.... : 2-6 a.m.
Gary, Ind.	150,000	42	YES	Parking permitted on one side of street	1 hr. : 2-5 a.m.
Grand Rapids, Mich.	193,000	23	YES	....	1 hr. : 1:30-6 a.m.
Hartford, Conn.	180,000	18.6	YES	YES	.... : 12-6 a.m.
Kansas City, Kan.	129,000	...	YES	NO	30 min. : 3-6 a.m.
Knoxville, Tenn.	124,769	26.4	NO	....	....
Little Rock, Ark.	107,331	26	YES	NO	30 min. : 2-6 a.m.
Miami, Fla.	*303,387	34.2	YES	When traffic requires	6 hrs : anytime
Mobile, Ala.	131,000	26	NO	....	....
Montgomery, Ala.	106,000	26	NO	....	....
Nashville, Tenn.	175,000	22.5	NO	....	....
New Haven, Conn.	165,000	22.4	YES	NO	3 hrs. : anytime
Norfolk, Va.	*299,241	48.4	NO	....	....

City and State	Est. Pop.	Area sq. Mi.	Is All-night Parking Illegal?	Is All-night Parking Enforced?	Parking Limits
Pasadena, Cal.	110,484	22	YES	YES	No parking : 2-6 a.m.
Paterson, N. J.	140,000	8	NO	....	....
Peoria, Ill.	115,000	14	YES	YES, on complaint based in residential areas	30 min. : 2-6 a.m.
Providence, R. I.	248,674	18.9	YES	YES	2 hrs. : 1-7 a.m.
Reading, Pa.	110,000	...	YES	NO	....
Richmond, Va.	240,000	39.9	NO	....	....
Sacramento, Cal.	160,000	...	NO	....	....
Salt Lake City, Utah	182,000	...	YES	On complaint basis and during periodic checkup	1 hr. : 2-5 a.m.
Scranton, Pa.	126,000	19.5	YES, in accordance with State Law which prohibits night parking without proper lighting	YES	....
Shreveport, La.	155,000	26.2	NO	....	....
South Bend, Ind.	150,000	...	YES, on alternate sides of designated streets	Strictly, in downtown area	No Parking: Oct.-April : 2-5 a.m. May - Sept. : 1-4 a.m.
Spokane, Wash.	182,000	41.8	YES	NO	5 hrs. : anytime
Springfield, Mass.	170,000	32	YES	YES	1 hr. : 2-6 a.m.
Syracuse, N. Y.	230,000	25	YES, with parking permitted on alternate sides of streets	YES	Nov.-April : 1-7 a.m. April-Nov. : 2-5 a.m.
Tampa, Fla.	233,000	69	YES, in downtown business area	YES	1 hr. : 1-6 a.m.
Trenton, N. J.	130,000	7.5	NO	....	....
Tulsa, Okla.	240,000	37.1	NO	....	....
Utica, N. Y.	101,479	16.5	YES	YES	30 min. : 2-7 a.m.
Wichita, Kas.	220,000	...	NO, but being considered	....	....
Wilmington, Del.	110,432	15	NO, ord. repealed in 1950	....	....
Worcester, Mass.	201,356	...	YES, Nov. through March	YES, parking permitted on certain sides of streets	No parking : 12-6 a.m.
Youngstown, Ohio	170,000	34	YES, in downtown area	YES, during winter months	No parking : 3-6 a.m.

* Included on basis of population being under 250,000 in 1950.

to check on stolen automobiles. Furthermore, "thefts of automobile accessories have 'skyrocketed'." Fort Wayne which says it is difficult to enforce its parking ban adds, "however, we have good public acceptance of the regulation and it works reasonably satisfactory."

An equal number of cities state that they have no difficulty in enforcing their parking bans. Among these are: Bridgeport, Camden, Hartford, Pasadena, South Bend, Springfield, Providence, Utica, and Worcester. Fall River states that "through publicity . . . the public realizes the value" of the ban, while Syracuse feels that difficulty of enforcement depends upon the amount of police business during the night.

There are a number of basic reasons for prohibiting all-night parking. Generally, these include aid in general law enforcement . . . crime prevention and detection, aid to street cleaning, snow removal, fire-fighting, pedestrian safety, and improvement of traffic movement. Peoria states that its parking ban has "reduced night hit-and-run accidents involving parked cars, facilitates snow removal and street cleaning, and is a deterrent to vandalism and robbery." Springfield believes its ban has "materially reduced burglary and crimes of vandalism." Providence, with nearly 30 years experience offers the most complete discussion of ban benefits and the following material is extensively taken from its report.

On the matter of police work Providence says that its all-night parking ban "materially assists night patrolmen" in "detecting criminals at work" since "most crimes requiring the use of motor vehicles are committed during the night or early morning hours." Also, without the ban the stealing of motor vehicles "would undoubtedly increase . . ."

With regard to fire fighting, Providence states that because of narrow streets, particularly in the densely populated areas, "all-night parking would make it extremely difficult and hazardous in responding to fires" and "parked vehicles sometimes create serious difficulties in combatting major fires . . ."

On street cleaning Providence reports that because of permitted parking and heavy traffic on down-town streets during the day, cleaning must be done at night, when there is no parking and very little traffic. This same problem exists during the day on arterial streets and on "many of the residential streets adjacent to factories because of the parked vehicle. This makes it essential to do street cleaning work during the night." Also, snow plowing and removal in the central business district can be done "more efficiently during the nightime." In the residential areas "it is necessary to prohibit parking . . . in order to permit passage of the plows."

A number of objections to modification of its all-night parking ban are made by Providence. "Even if parking were permitted on only one side of . . . streets, a satisfactory (snow) plowing operation could not be accomplished, since it is necessary to plow even the residential streets on a curb-to-curb basis." And from the police standpoint "any modification

of a permanent prohibition would create a serious enforcement problem therefore undesirable . . ."

However, from a traffic standpoint, "there is no objection to permitting parking all night in those areas where legal parking is permitted during daytime hours, since the volumes of traffic are less during the night." Yet a modification of the ban to permit parking on the majority of residential streets has several objections. Many streets in Providence are not wide enough for traffic and police and fire department emergencies to permit parking on both sides. A careful street-by-street inventory would be required to determine the location and necessity of some prohibition of all-night parking on these streets. A large sign program would also be required in order to prevent public confusion as to what areas would still be under the parking restriction. Even with partial street parking, "in some of the most congested areas . . . there would not be enough curb space . . . to accommodate all the vehicles . . . in the immediate area." Also, if exceptions were granted to "those persons not having off-street space available on the same property as their residence, a large administrative task would be created . . . in investigating and authorizing the space permission."

Finally, in view of the zoning ordinance in Providence which requires off-street parking facilities on all new residential and commercial properties, modification of the ban to permit street parking would be "unfair to those persons" who have complied with this requirement.

SUMMARY AND CONCLUSIONS

Two-thirds of the cities which replied to the questionnaire have some form of ban against all-night parking during all or part of the year. Where a ban has been well-established, is fully enforced, and is supported by a good program of public education and by a zoning code which requires off-street parking facilities for new construction, it has resulted in better policing, crime prevention, firefighting, efficient and economical street cleaning and snow removal, and increased pedestrian safety.

These advantages are lost, however, in those cities where enforcement is sporadic or ignored. Some cities openly admit that they make little or no attempt at enforcement and cite as reasons a lack of man-power, insufficient off-street parking facilities, and public objection. At the same time many of these same cities recognize the overall advantage of an all-night parking ban and that the main objection comes only from a small part of the public who are directly affected by the ban.

For example, in reply to the question of whether the ban had worked hardships on the citizenry, Flint said, "not necessarily on the citizenry, however, one vigorous complaint and the parking ordinance was rescinded."

On the other hand, there are just as many cities which report no diffi-

culty with enforcement of their bans, good public acceptance, and very satisfactory results. The whole irony of the problem is that the all-night parking ban is needed most in the congested areas of cities where parking spaces are at a premium and where the advantages of a ban are the greatest. To a large extent any modification of bans in these areas only helps to defeat the purpose of the ban. And although modifications are easier to make in the outer, less congested areas of the cities, there is little, if any, real need for them there.

There is no indication of any lessening of all-night parking bans, despite the fact that all cities report large increases in the number of motor vehicles since 1945. The public demand for effective street cleaning and particularly, snow plowing and removal, plus the need of preventing car vandalism and theft cannot be met by weakening bans against all-night parking. In fact where this has been done as in Albany, for example, "the problem has become worse." Youngstown, where parking is now prohibited on some streets on one side only, says that "with the ever increasing number of automobiles on our streets it is only a matter of time until there will be prohibition of parking on most of the streets at all times."

There is little doubt that with the present number of automobiles and certain prospects for more each year, it will soon be impossible, if it is not already, to park them all night on our cities' streets within the immediate vicinity of their respective owners or drivers. The construction of off-street parking lots or garages in highly-congested areas and the requirement of off-street parking facilities for all new residential construction holds a more realistic solution to this growing problem of the automotive age.

* * *

Traffic and Travel Gains Reported in 1955

Preliminary estimates of nationwide motor-vehicle travel for 1955 indicate an increase of 4.6 per cent over the previous year, according to the Bureau of Public Roads, Department of Commerce. The 1955 estimate is part of an article appearing in the December issue of *Public Roads* published by the Bureau.

Discussing traffic and travel trends, the article points out that in 1954 nearly 57 per cent of the mileage driven was on rural roads and 43 per cent in cities and towns. In 1948 the division was about equal. Total travel by vehicles of all kinds increased more than 22 per cent since 1950.

Between 1940 and 1954 the total mileage driven by trucks and truck combinations increased at a much greater rate than that for passenger cars and buses. Truck travel was up 112 per cent, passenger cars 81 per cent, and buses 65 per cent, over this period.

Average daily travel on all rural roads in 1954 was 869 million vehicle-miles, compared with 845 million in 1953; a 2.9 per cent increase.

Traffic Deaths Reduced 3½ Per Cent in S-D Day Period

The recent three-week safe driving campaign, of which "S-D Day" was the mid-point, brought the first downward trend in traffic fatalities since the end of February, the President's Committee for Traffic Safety has announced.

Final figures, gathered for the Committee by the National Safety Council, show 2,069 fatalities for the 21 days of the campaign, Nov. 21 through Dec. 10, including those whose deaths occurred after the day of the accident. This was 75 fewer than the corresponding 1954 period, when the toll was 2,144.

Thus, a 3½ per cent reduction in traffic deaths was achieved during the period of the campaign, in the face of an upward trend that had continued uninterruptedly, beginning in March.

The March fatalities were 5 per cent above March, 1954; April and May were up 6 per cent; June, 7; July, 11; August, 10; and September and October, 12. (*See page 26 for November figures.*)

On S-D Day, itself—Safe Driving Day, Dec. 1—the toll was 89, including delayed deaths, as compared with 81 on the corresponding Thursday of 1954, Dec. 2, an increase of 9.8 per cent.

Twenty-one states and the District of Columbia went entirely free of fatalities on this year's S-D Day, and six other states had better records than they had last year.

* * *

Crash Injury Research Compares Cars (By Age) in Accidents

A recent report of Automotive Crash Injury Research of the Cornell University Medical College compares the accident and injury factors in 1940-49 and 1950-54 automobiles.

Accidents and injury data are analyzed on 417 automobiles involved in injury-producing rural accidents during 1953 and 1954 and selected by controlled sampling techniques. The data were analyzed to compare cars manufactured 1940-49 with cars manufactured 1950-54 to determine whether "newer" cars produced more or less injuries than "older" cars in injury-producing accidents.

It is found that (a) 1950-54 and 1940-49 cars are involved in similar injury-producing accidents, (b) 1950-54 and 1940-49 cars produced various injury effects with nearly identical frequency, and (c) the structural and mechanical causes of injury in 1950-54 and 1940-49 cars are similar.

Thus, the data in this report show that 15 years of passenger automobile design have, at best, produced no advance in "crash worthiness" or decreased the traumatic effects when injury-producing accidents occur.

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COURT DECISIONS MOVE TOWARD RECOGNITION OF FACTORS INVOLVED IN STOPPING DISTANCES

THE PRESENT disposition of the courts toward taking judicial notice of various psychophysical and mechanical factors involved in bringing a moving vehicle to a stop is illustrated by some recent cases hereinafter discussed in detail. The trend toward recognition of these factors seems to have lagged behind scientific developments which have become quite generally recognized and acted upon by drivers in their daily operations. In view of the readiness of some courts to judicially notice other even more recently developed scientific facts and phenomena, their hesitancy in this respect hardly seems consistent. (cf: "Judicial Notice of Radar Approved," *Traffic Digest & Review* September 1955, p. 10.)

Specific information relative to average stopping distances under given conditions is now in the hands of most persons who operate automobiles, or at least is readily available to them in the form of detailed charts, diagrams and even visual demonstrations conducted by various agencies for the benefit of the driving public. Some earlier cases had made tentative pronouncements in the direction of noticing these facts, but these were limited to facts of common knowledge that vehicles moving at given speeds *obviously* could (or could not) be stopped within given distances. Still, although no court of last resort has ventured to accept the familiar facts, known to most drivers, in cases involving *definite* figures, progress toward that result has been substantial when viewed in perspective.

MISSOURI CASES

The courts of Missouri have spoken on this subject more often than those of any other state, usually in civil cases involving the ability of a driver to stop in time to avoid a collision under the so-called "humanitarian doctrine" of last clear chance. In one of its most recent decisions (*Mallow v. Tucker*, 281 S.W.2d 848 (July 11, 1955)), the Supreme Court

of Missouri states its present stand: "We cannot take judicial notice of the *exact* distance within which a certain automobile may be stopped under given conditions. * * * There have been instances in which we have taken notice of certain *limits* within which a stop could be made. * * * However in the instant case, when we consider reaction time, the speed of the car, the distance involved and other circumstances in evidence, we cannot judicially know that plaintiff could have brought her car to a stop, after discoverable danger arose, in time to have avoided the collision." (Emphasis supplied.)

In the above case the court refers to *McCombs v. Ellsberry*, 337 Mo. 491, 85 S.W.2nd 135 (1935), in which the evidence showed defendant's car was approximately 10 feet from an intersection when plaintiff's car entered it. In this situation the court said: "The record does not disclose any definite distance within which defendant could have checked the speed or changed the direction of his automobile. * * * However, while courts may not take judicial notice of the precise distance a given automobile may be stopped in under given conditions, judicial notice has been taken of the limits within which a stop could be effected, viz. at a speed of 45 to 50 mph, within 300 to 350 feet * * * and at 8 mph, within 40 feet."

In *Hutchinson v. Thomson*, 175 S.W.2d 903 (S. Ct. Mo. 1943), the court had said: "There is no evidence in the case of the distance in which a truck could be stopped when moving 8 or 10 miles, but we know that it could have been stopped within the minimum distance which appears to have been available—26½ feet." In *Hammell v. St. Louis Pub. Serv. Co.*, 268 S.W. 2d 60 (1954)—a bus-car collision—a Missouri Court of Appeals said: "We may take judicial notice of the fact that at a speed of 5 mph or less the automobile could have been stopped almost instantly—within a few feet."

SOUTH CAROLINA CASES

Smith v. Hardy, 88 S.E. 2d 865 (So. Car. 1955), arose out of the death of several persons in a head-on collision between a truck and an automobile, and the question of stopping distances was involved. It was contended that the trial court erred in refusing to take judicial notice of the facts shown on a chart in a driver's handbook published by the Highway Department which purported to show the familiar stopping distances of vehicles at various rates of speed as well as the distances at different speeds which a motor vehicle will cover before the driver after "seeing danger" can apply his brakes, shown thereon as "driver's thinking distance." The Supreme Court upheld the trial court's refusal to take judicial notice of these facts, saying: "The record does not disclose the source of the facts stated on the chart appearing in the 'Driver's Handbook' or the circumstances under which they were developed. No one was offered as a witness who had made a test of this nature. A chart somewhat similar to

the one here involved will be found in Blashfield's Cyclopedia of Automobile Law and Practice, (Perm. Ed.) Vol. 9C, sec. 6237, and it has been referred to in several decisions from other jurisdictions. While it is common knowledge that some interval necessarily elapses before the impulses to apply automobile brakes can be made effective, we cannot take judicial notice of the *exact* reaction time, nor can we take judicial notice of the *precise* distance in which a given motor vehicle traveling at a particular speed on a particular road can be stopped. * * * *Of course there are maximum limits that are matters of common knowledge.*" (Emphasis supplied.)

Earlier, in *Thompson v. Brewer*, 82 S.E.2d 685 (1954), the same court had upheld the trial court in directing a verdict against the plaintiff because of his contributory negligence in following too closely. He was driving 50 to 60 mph on dry black top paving and, finding himself unable to pass a slowly moving truck because of an approaching car, crashed into the rear of the truck, leaving 80 feet of skid marks. The Supreme Court said: "It is common knowledge that a driver cannot bring his automobile to a stop from a speed of 50 - 60 mph within a distance of 65 feet."

LEGAL SITUATIONS IN OTHER STATES

In *Muse v. Page*, 125 Conn. 219, 4A.2d 329 (1939), the Connecticut Supreme Court of Errors said: "While courts take judicial notice of such things as are of common knowledge * * * the principle is not available to establish the stopping distance of an automobile with the precision and exactitude claimed by the plaintiff here. * * * Judicial notice cannot be taken of the shortest distance the defendant's car traveling at 25 mph could be stopped in, but may be taken that this car could have been stopped in at least 75 feet."

In *Perhaska v. Silberg*, 302 Mich. 47, 4 N.W.2d 462 (1942), the plaintiff, driving less than 10 mph, was 45 feet away when he saw defendant enter the intersection without stopping. The court said: "It is common knowledge that a car with good brakes, on a good highway, and traveling less than 10 mph can come to a complete stop within a distance of 45 feet."

In *Weitzman v. Bissell Lumber Co.*, 193 Wis. 561, 214 N.W. 353 (1927), the plaintiff testified that she did not see the train with which she collided until she was 85 feet from the crossing. The court said: "It is a matter of common knowledge that a car traveling at this speed (28 mph) can be stopped at a much less distance than 85 feet when the brakes are in proper order."

In *DuTemple v. Schafer Bros. Logging Co.*, 169 Wash.2d 102, 13 P.2d 446 (1932), the court said: "It is a matter of common knowledge that an automobile equipped with good brakes, traveling 10 - 12 mph can be stopped in considerably less than 15 feet."

MORE RAPID PROGRESS TOWARD RECOGNITION OF REACTION TIME

While the courts have been unwilling as yet to recognize even *average stopping distances* they have shown no such reluctance with regard to the component factor of *average reaction time*—the "psychophysical phenomena of reaction time" as it was referred to in *Kick v. Franklin*, 345 Mo. 752, 137 S.W.2d 512 (1939). This was a railroad crossing accident case where the negligence alleged was failure of the engineer to sound warning in time to give the motorist opportunity to act upon it and stop his car. The trial court had instructed the jury as a matter of law that such a warning could have been given "in a second, or a fraction of one." The railroad produced an expert witness who testified to "the minimum time it would take for the engineer to visualize and appreciate respondent's peril, determine to sound a warning and commence to act, for the sound to reach the respondent's ears, for respondent to hear the warning, appreciate the danger and decide to stop or turn aside his car." Since in his opinion all of this would have taken much longer than a second it was contended that it was conclusively shown there was not sufficient time for an effective warning. However, the Supreme Court held this evidence was not controlling and that the trial court's instruction on raction time, based on common knowledge, was proper. In 1949 the same court said: "*We judicially notice that reaction time is required for the operator of a vehicle to 'comprehend' the situation prior to his application of brakes.*" *Yeaman v. Storms*, 358 Mo. 774, 217 S.W.2d 495 (1949).

Later, in *Dister v. Ludwig*, 362 Mo. 162, 240 S.W.2d 694 (1951), the court remarked that there was no evidence in the case as to the distance in which a motorist traveling 15 mph could have stopped in time to avoid striking a pedestrian 56 feet ahead of her, but said: "We have taken judicial notice of the distance in which an automobile traveling 15 mph can be stopped. * * * We have also judicially noticed that a reaction time is required for a motorist to apply brakes on an automobile."

Meanwhile other courts had also become aware of reaction time. In 1947 the Louisiana Court of Appeals said: "It is a matter of common knowledge of which he (the district judge) could have, and we do, take judicial notice that when the driver of a motor vehicle is confronted with a sudden emergency, some period of time is necessary for him to realize the situation, make a decision and then apply the brakes to his vehicle." *Gaines v. Standard Accident Insurance Co.*, 32So. 2d 633 (La.App.-1947). See also *Murray v. Banning*, 17 Wash.2d 1, 134, P.2d 715 (1943), and *Berton v. Cochran*, 89 Cal. App.2d 776, 185 P.2d 349 (1947), in which the court said: "It is common knowledge that it requires an interval of time, after deciding that the brakes should be applied, to apply pressure on them and that it requires an additional interval of time thereafter for the brakes to commence to be effective."

AVERAGE REACTION TIME IS ¾ OF A SECOND

Having recognized that *some* period of time is required for the perception and comprehension of danger and the necessary physical responses thereto, it was a short step to recognition of the average duration of such time. In *Standard Oil Co., v. Crowl*, 198 F.2d 580 (Mo.-1952), the U.S. Court of Appeals said: "Missouri courts take judicial notice that it takes an appreciable time for a person confronted with an emergency to react to the situation and to act to avoid the danger in it. The expression used in the Missouri cases is 'reaction time' and *in the absence of proof to the contrary the reaction time of a normal person is presumed to be three quarters of a second.*" The court here had reference to *Vietmeier v. Voss*, 246 S.W.2d 785 (S. Ct. Mo. 1952), where it was said: "Unless a longer time affirmatively appears in the proof the courts recognize that such reaction time is three quarters of a second." The same was held in *DeLay v. Ward*, 262 S.W. 2d 628, 635 (1953) and again in *McKinney v. Robbins*, 273 S.W.2d 513 (1954).

Even prior to this an Ohio Court of Appeals had arrived at the same conclusion. In *Ashbrook v. Cleveland Railway Co.*, 34 N.E.2d 992 (1941), defendant's street car struck plaintiff's automobile which stalled across the tracks after a skid, at which time the car was 100 - 150 feet away, moving about 35 mph. The court said: "It is a fact of mathematical determination that a vehicle moving at the rate of 35 mph is traveling about 52 feet per second. It is a matter of common knowledge also that the so-called reaction time of the average man (that is the time elapsing from the moment one sees danger until the moment when he can actually get into action to avoid it) is about ¾ of a second." Likewise in *Kaan v. Kuhn*, 64 Wyo. 158, 187 P.2d 138 (1947), the court cited the *Ashbrook* case and said: "It is common knowledge that at least *half a second* after danger appears is required for the average motorist to transfer his foot from accelerator throttle to brake." Varying somewhat in degree from these figures, the Illinois Appellate Court said, in *Seeds v. Chi. Transit Authority*, 342 Ill. App. 303, 96 N.E.2d 646 (1950): "Common knowledge tells us that the 'reaction time' would be *at least a second.*"

MARYLAND COURT EXTENDS JUDICIAL NOTICE TO ENTIRE PROGRESS OF STOPPING

In *State v. Belle Isle Cab Co.*, 194 Md. 550, 71 A.2d 435 (1950), a cab driver had run over a pedestrian who was lying in the street, unconscious. The cab driver insisted he was traveling only 15 or 20 mph and did not see the prone body until within about 25 feet of it, although the undisputed evidence showed he left a 42-foot skidmark and shoved the body several feet after striking it. The Court of Appeals said: "It is obvious that, no matter how quick might have been the reflexes of the driver the car did travel *some* distance while the driver was putting on his brakes and while the brakes were taking hold with sufficient grip to skid the wheels. There

is no evidence how far this was but it is a frequent occurrence to put on brakes and it is a matter of common and ordinary knowledge that some time elapses before the impulse to apply them is transmitted into their application. If we add some space to that already shown by the skidmarks it becomes apparent that the driver saw Stehley when he was at least several car lengths away."

* * *

While the progress of the courts toward judicial recognition of average stopping distances under given circumstances has seemed slow, still it is undeniable that there has been progress. Compare the advanced position of the courts as expressed in the foregoing cases with that of the Georgia Court of Appeals in *Archer v. Aristocrat Ice Cream Co.*, 87 Ga. App. 567, 74 S.E.2d 470, 473 (1953), where it was held that judicial notice could not be taken of the reaction time of the driver or the stopping distance of a car which laid down 182½ feet of skidmarks before striking a truck which turned left in front of it. Said the court: "This is not a subject for judicial notice but a matter of proof upon the trial of the case."

It has now been recognized (1) that cars moving at given speeds can or cannot be stopped within certain minimum or maximum distances; (2) that reaction time is required for drivers to perceive and comprehend the situation and act to avoid the danger; (3) that the average duration of this reaction time is ¾ second; (4) that cars travel an additional distance after the brakes take hold with sufficient grip to skid the wheels. Physical evidence of skidmarks and estimates of minimum speed based upon their measurements have been held admissible in cases too numerous to cite. It would seem but a simple, logical step to recognition of the average distance required for stopping under known circumstances.

* * *

DEALERS FURNISH 8,079 CARS FOR DRIVER EDUCATION

An all-time high of 8,079 cars, valued at more than $16,000,000, were provided the nation's high schools by new car dealers for driver education during the 1954-55 school term, the Inter-Industry Highway Safety Committee has announced.

"Annual increases in the number of cars provided have swelled the total to almost double that of six years ago," said A. VanderZee, chairman of the Inter-Industry Committee and vice president of the Chrysler Corporation. "The total of 8,079 cars was 779 more than the number available the preceding year," he said.

"The number of cars made available to schools is concrete evidence of the contribution the nation's new car dealers are making to traffic safety. During the last school year another step has been taken toward the goal of giving eligible students an opportunity to learn proper attitudes and safe driving skills in high school driver education courses. . ."

Worst Since 1941

1955 Estimated Death Toll: 38,500

THE TRAFFIC accident death toll in the United States for 1955 was estimated by the National Safety Council (on Dec. 30) at 38,500.

This is about 7 per cent and 2,500 lives greater than the 1954 traffic death toll of 36,000, the Council said.

The 1955 toll is the highest since 1941— the year that set the all-time record with 39,969. In the history of automobile travel, only four years have brought more than 38,000 deaths—1936, 1937, 1941 and now 1955.

The Council's 1955 estimate is based on actual reports for 11 months, with a death toll of 34,690 for that period—an increase of 7 per cent from the comparable 11-month period last year.

Traffic deaths for November alone went up 10 per cent—the ninth consecutive month this year to show an increase over the corresponding month of 1954. The November death total of 3,680 was the highest for that month since 1941.

For many months the death rate (deaths per 100 million miles) has been down because travel was increasing faster than fatalities. The Council said the sharply higher death totals in recent months, however, have now made the increase in deaths about even with the increase in mileage. At the end of 10 months (the latest month for which mileage is available) deaths and travel each were up about 7 per cent, and the death rate of 6.3 was about the same as last year.

Among 47 states reporting for November, 30 had higher totals than in the previous year, while three reported no change and only 14 showed decreases.

For 11 months, 34 of the 47 states had higher totals, two reported no change, and 11 had decreases. Except for Idaho, which reported a 21 per cent decrease, the reductions generally were small, as follows:

Idaho	−21%	Maryland	− 3%
Minnesota	− 9%	Nebraska	− 3%
Arizona	− 7%	Iowa	− 2%
Kansas	− 6%	New Mexico	− 2%
Wyoming	− 5%	North Dakora	− 1%
New Jersey	− 4%	West Virginia	*

*Less than half of one per cent.

The urban experience, although worse than a year ago, was more favorable than the rural record. Among 510 reporting cities, deaths were up 5 per cent for both November and the 11-month period.

Among the cities with fewer deaths for 11 months, the following have populations of more than 200,000:

Syracuse, N. Y.	−53%	Baltimore, Md.	−10%
Tampa, Fla.	−40%	Toledo, Ohio	− 8%
Dallas, Tex.	−28%	Minneapolis, Minn.	− 8%
St. Paul, Minn.	−27%	Kansas City, Mo.	− 8%
Oakland, Calif.	−24%	Detroit, Mich.	− 8%
Memphis, Tenn.	−20%	Dayton, Ohio	− 7%
Rochester, N. Y.	−16%	Oklahoma City, Okla.	− 6%
Milwaukee, Wis.	−15%	Indianapolis, Ind.	− 5%
Omaha, Neb.	−14%	Cleveland, Ohio	− 4%
St. Louis, Mo.	−14%	New Orleans, La.	− 4%
Norfolk, Va.	−10%	Chicago, Ill.	*

*Less than half of 1 per cent.

Among the 510 cities, 334 had perfect records in November, and of these the three largest were Salt Lake City, Utah (182,100); Hartford, Conn. (177,400), and New Haven, Conn. (164,400).

For 11 months, 89 of the 510 cities still had perfect records, the three largest being Medford, Mass. (66,100); Muskegon, Mich. (48,400), and La Crosse, Wis. (47,500).

At the end of 11 months, the three leading cities in each population group, ranked according to the number of deaths per 10,000 registered vehicles, were:

	Reg. Rate		*Reg. Rate*
Over 1,000,000 Population		200,000 to 350,000 Population	
Detroit, Mich.	3.2	Syracuse, N. Y.	1.1
Los Angeles, Calif.	3.3	Norfolk, Va.	1.3
Philadelphia, Pa.	3.6	Oklahoma City, Okla.	1.3
750,000 to 1,000,000 Population		100,000 to 200,000 Population	
St. Louis, Mo.	2.7	South Bend, Ind.	0.6
Cleveland, Ohio	2.9	Trenton, N. J.	0.7
Baltimore, Md.	3.2	Baton Rouge, La.	0.8
500,000 to 750,000 Population		50,000 to 100,000 Population	
Minneapolis, Minn.	1.8	Medford, Mass.	0.0
Dallas, Tex.	2.0	Lincoln, Neb.	0.2
Milwaukee, Wis.	2.0	Alexandria, Va.	0.3
350,000 to 500,000 Population		25,000 to 50,000 Population	
Indianapolis, Ind.	2.0	Muskegon, Mich.	0.0
Portland, Ore.	2.0	Cheyenne, Wyo.	0.0
Kansas City, Mo.	2.1	La Crosse, Wis.	0.0

Driving After Drinking Tests in Alcohol Seminar

ACTUAL driving—after-drinking tests, in a field house, to show the effects of alcohol on driving ability will be conducted during a two-week seminar on "Alcohol and Road Traffic" Feb. 13-24 in Louisville, Ky.

The Southern Police Institute, University of Louisville, will conduct the seminar, in cooperation with the National Safety Council's committee on Tests for Intoxication and the Traffic Institute of Northwestern University.

Enrollment is limited to 30 law enforcement officers on active duty. Purpose of the seminar is to help technicians qualify as expert witnesses in chemical test cases in court and to enable them to serve as instructors to enforcement agencies in their areas.

Lecture material will include the history of chemical tests for intoxication, a review of the scientific studies on the effects of alcohol on accident proneness, objective and chemical tests to measure alcoholic influence, chemical test case law, court presentation, and the setting up of a chemical test program.

The laboratory work, in addition to the driver tests, will include supervised instruction in the use of any recognized body fluid or breath method of determining alcohol content.

Nationally-recognized authorities in the field of chemical testing for intoxication will comprise the teaching staff. These include: Lt. Robert F. Borkenstein, director of the Indiana State Police Laboratory, who is the course director; Alan Canty, director, Psychopathic Clinic, Recorder's Court, Detroit; Robert L. Donigan, counsel, the Traffic Institute; Kurt M. Dubowski, director of chemistry, Iowa Methodist Hospital, Des Moines; Rolla N. Harger, professor of biochemistry and toxicology, Indiana University School of Medicine; Dr. Herman A. Heise, American Medical Association, Milwaukee, Wis.; R. C. Hill, secretary, Committee on Tests for Intoxication, National Safety Council; Richard L. Holcomb, professor, Institute of Public Affairs, University of Iowa; C. W. Muehlberger, director, Michigan State Crime Detection Laboratory; Dr. Henry Newman, professor of neurology, Stanford University School of Medicine, Lloyd M. Shupe, police chemist, Columbus, O., and H. Ward Smith, director, Crime Detection Laboratory, Department of the Attorney General, Toronto, Ont.

Further information on about the seminar may be obtained from David A. McCandless, director, Southern Police Institute, University of Louisville, 8, Ky.

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A new device that looks like a parking meter makes it possible for the parking violator to pay his fine without appearing in court or using the mails.

Institute Book Review

POLICE MATHEMATICS. By Conrad Rizer. Charles C Thomas, Publisher, Springfield, Ill. 1955. 154 pages. $5.75.

Reviewed by

JAMES STANNARD BAKER

Director of Research and Development

The Traffic Institute

HERE IS a book that ought to be on the shelf in every police detective division and crime laboratory. It is especially useful for the policeman who has had some algebra and trigonometry in high school or college but wants to refresh his memory on it for possible use in scientific crime detection.

The first half of the book is a very concise and clear review of the mathematical principles involved in measurement and computation, trigonometry, the elements of an equation, analytic geometry, graphs for computation, equations of motion and energy, fundamentals of probability, and the elements of statistics. These sections are accompanied by exercises and problems with answers which make the book especially useful as a self-training device.

The second half of the volume consists of a large number of very interesting applications of mathematics under two general headings: criminal investigation and traffic control. The descriptions are not only of the mathematics involved, but also of many useful investigating techniques.

Included in the traffic section are a number of charts and nomograms, as well as formulas which will be useful to those who wish to get the answers to particular problems without deriving the formulas themselves and sometimes without having to work the problems involved. Each of these last two sections is arranged alphabetically under such headings as Energy of a Car, Headlight Lens—Diameter from Fragment of Edge, Indices, Parking—Layout of Space, Sight Distances on Highways, Signs—Reverse Turn, Skid Marks, Speed Averages for Motor Vehicles in a Route Study, Speed of a Motor Vehicle, and so forth.

Policemen who wish to review arithmetic and simple mathematical problems, for example, in preparation for civil service examinations, would find this technical level publication less suitable than some of the more general books on arithmetic for every-day use.

University of Michigan
General Library
Ann Arbor, Michigan RD

TRAINING CALENDAR

(*All training courses will be conducted at the Traffic Institute, Evanston, Ill., unless otherwise indicated.*)

Jan. 23-Feb. 3—Fundamentals of Police Traffic Service, University of California, Los Angeles.

Jan. 30-Feb. 3—Traffic Court Conference, School of Law, University of Southern California, Los Angeles (conducted with the American Bar Association).

Jan. 30-Feb. 17—Police Traffic Records.

Feb. 6-17—Fundamentals of Police Traffic Service, Arizona State College, Tempe, Ariz.

Feb. 6-24—Motor Vehicle Traffic Control (for Air Force).

Feb. 9-10—Western regional conference for graduates of the TPA Training Program, Phoenix, Ariz.

Feb. 20-March 2—Personnel Management.

Feb. 27-March 9—Traffic Law Enforcement, Northwestern University, Boston, Mass.

Feb. 27-March 16—Fundamentals of Police Traffic Service.

March 2-3—Southern regional conference for graduates of the TPA Training Program, Atlanta, Ga.

March 5-16—Supervision of Police Personnel.

March 5-9—Traffic Engineering Seminar, "Field Study and Survey Methods."

March 12-16—Traffic Engineering Seminar, "Regulation and Control Devices."

March 12-13—Eastern regional conference for graduates of the TPA Training Program, Philadelphia, Pa.

March 19-23—Traffic Engineering Seminar, "Traffic and Transportation Planning."

March 19-30—Training Programs and Methods for Police.

Apr. 9-May 4—Motor Vehicle Safety and Traffic Regulation (for Army).

Apr. 16-May 4—Accident Investigation.

Apr. 30-May 18—Traffic Law Enforcement.

June 18-22—Fleet Supervisor Course.

June 21-22—Northwest regional conference for graduates of the TPA Training Program, Vancouver, B.C., Canada.

July 9-27—Motor Vehicle Traffic Control (for Air Force).